

FIG.1

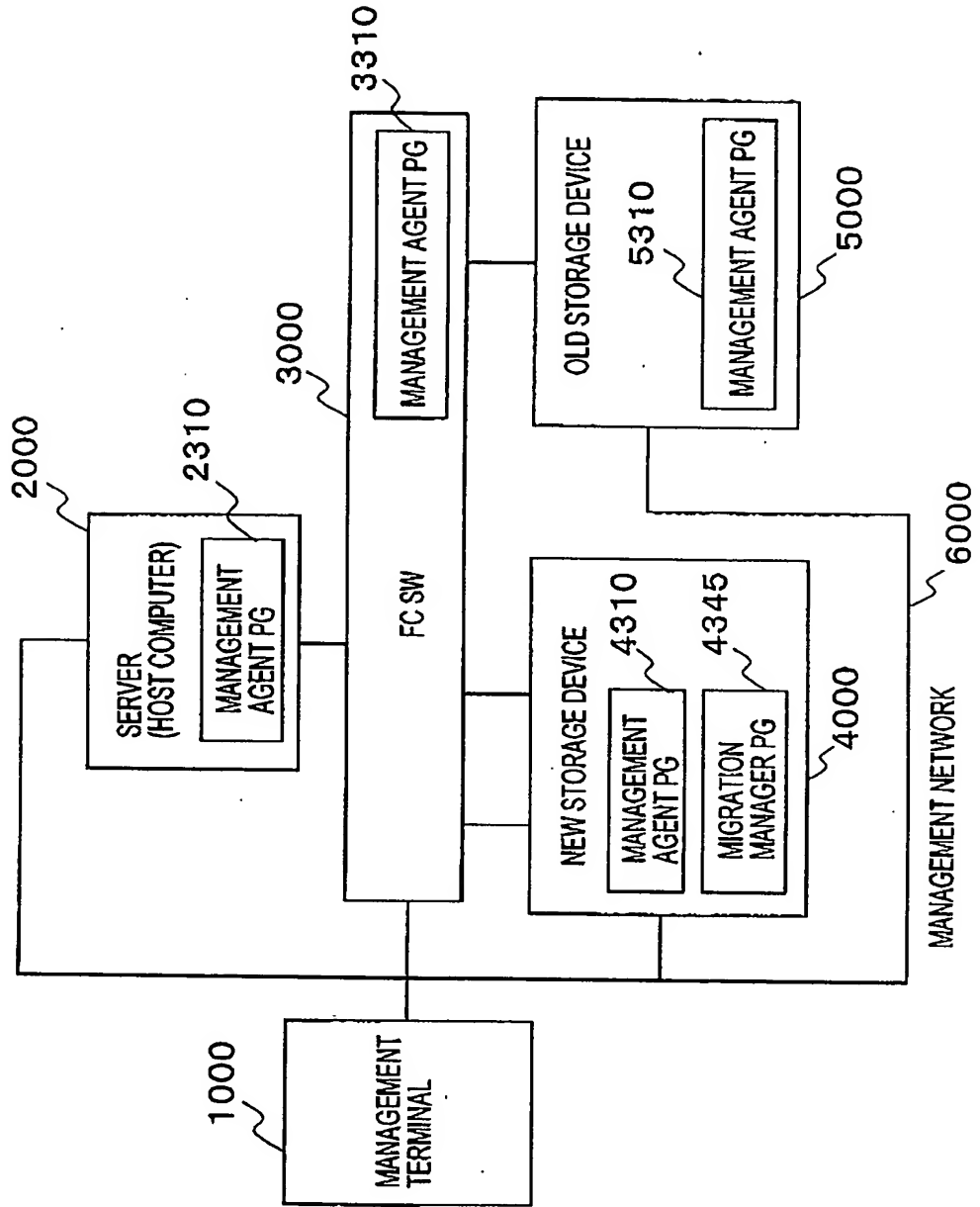


FIG.2

MANAGEMENT TERMINAL 1000

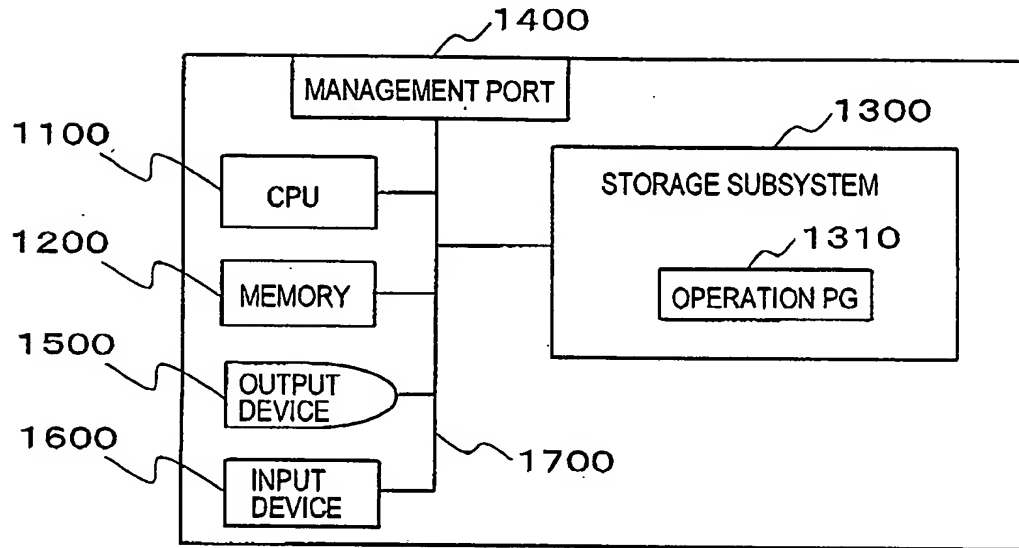


FIG.3

SERVER (HOST COMPUTER) 2000

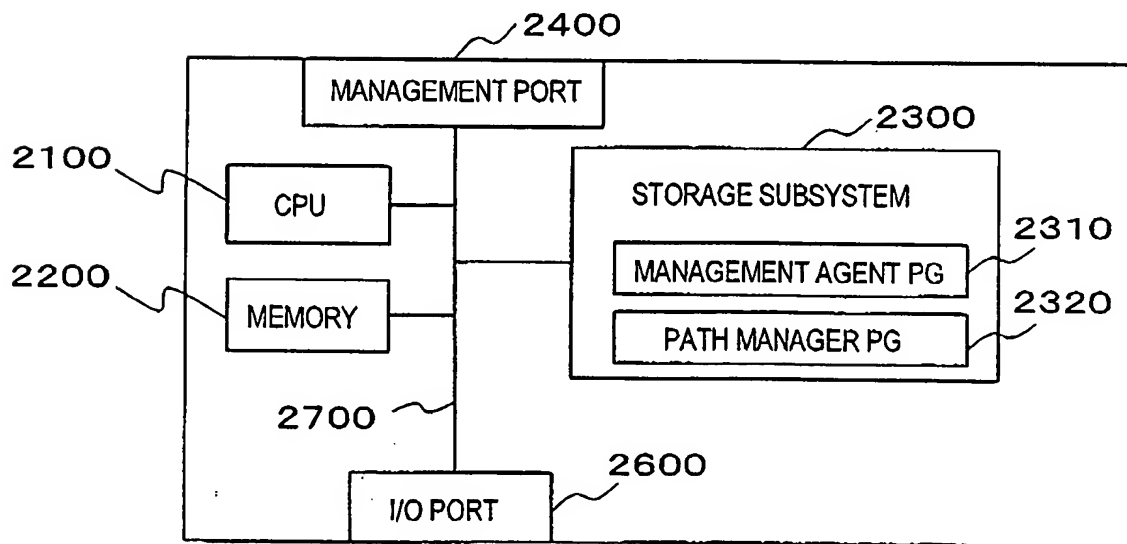


FIG.4

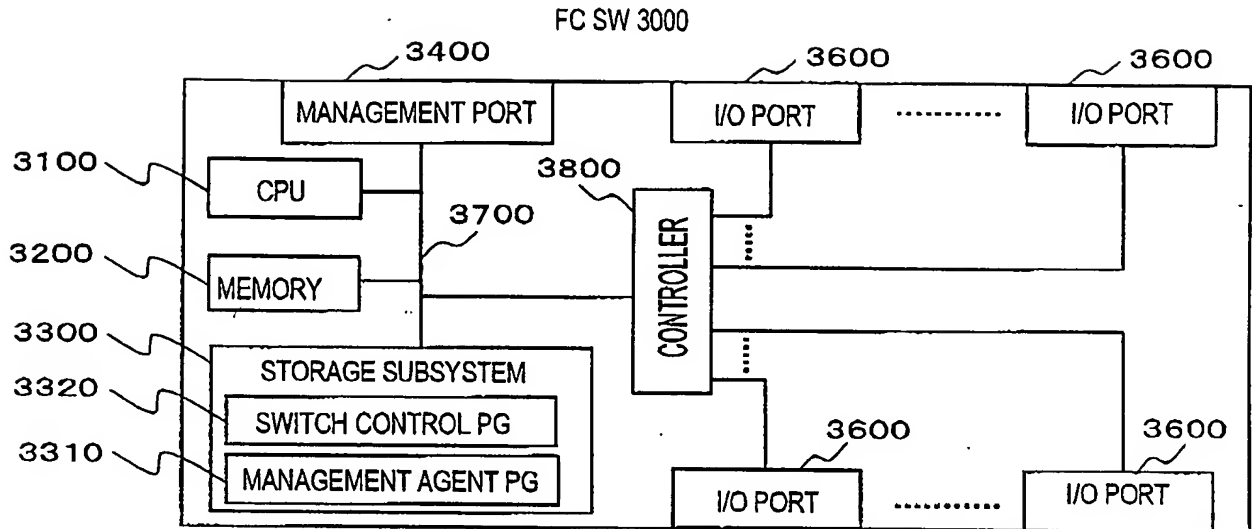


FIG.5

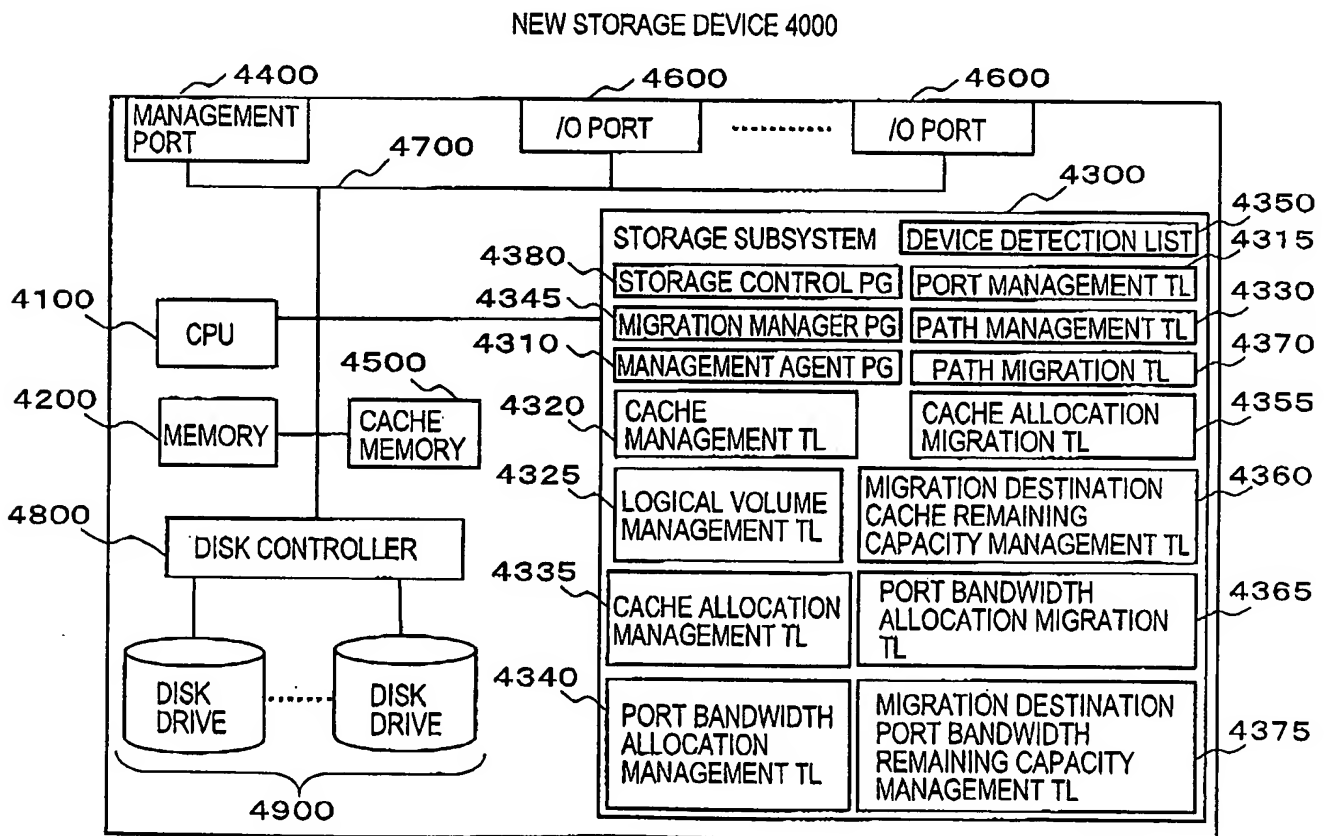


FIG.6

PORT MANAGEMENT TL 4315, 5315

43151 PORT ID	43152 PORT WWN WWN	43153 SCSI ID	43154 BANDWIDTH CAPACITY	43155 BANDWIDTH REMAINING CAPACITY
port-b1	WWNb1	2	200MB /s	50MB /s
port-b2	WWNb2	3	200MB /s	200MB /s
port-b3	WWNb3	4	100MB /s	50MB /s
port-b4	WWNb4	4	200MB /s	200MB /s
:	:	:	:	:

FIG.7

CACHE MANAGEMENT TL 4320,5320

43201 CACHE TOTAL CAPACITY	43202 CACHE REMAINING CAPACITY
10GB	7.5GB

FIG.8

LOGICAL VOLUME MANAGEMENT TL 4325,5325

43251 LOGICAL VOLUME ID	43252 PATH ID LIST	43253 VOLUME CAPACITY	43254 DATA ARRANGEMENT
vb1	path -b1, path -b3	10GB	PARITY GROUP 0
vb2	path -b2	20GB	PARITY GROUP 1
vb3	path -b4	30GB	PARITY GROUP 2

FIG.9

PATH MANAGEMENT TL 4330,5330

43301 PATH ID	43302 PORT ID	43303 LUN	43304 LOGICAL VOLUME ID
path -b1	port -b1	1	vb1
path -b2	port -b1	2	vb2
path -b3	port -b3	1	vb1
path -b4	port -b3	2	vb3

FIG.10

CACHE ALLOCATION MANAGEMENT TL 4335,5335

43351 LOGICAL VOLUME ID	43352 CACHE ALLOCATION AMOUNT	43353 CACHE RESIDENT AREA
vb1	1GB	300MB (ADDRESS 0 - 153600)
vb2	NO	500MB (ADDRESS 0 - 256000)
vb3	1GB	NO

FIG.11

PORT BANDWIDTH ALLOCATION MANAGEMENT TL 4340,5340

43401 PATH ID	43402 PORT ID	43403 ALLOCATION BANDWIDTH
path -b1	port -b1	100MB /s
path -b2	port -b1	50MB /s
path -b3	port -b3	50MB /s

FIG.12

DEVICE DETECTION LIST 4350

43501	433502	43503	43504
DETECTION OBJECT ID	DEVICE TYPE	DEVICE INFORMATION	IP ADDRESS
vb1	STORAGE	VENDOR	100.100.100.103

FIG.13

CACHE ALLOCATION MIGRATION TL 4355

43551	43552	43558	43553	43554	43555	43559	43556	43557
PROCESSED FLAG	MIGRATION SOURCE CACHE DEFINITION			MIGRATION DESTINATION CACHE DEFINITION				
	LOGICAL VOLUME ID	CACHE ALLOCATION AMOUNT	CACHE RESIDENT AREA	LOGICAL VOLUME ID	CACHE ALLOCATION AMOUNT	CACHE RESIDENT AREA		
DONE	vb1	1GB	300MB	va1	1GB	300MB		
YET	vb2		500MB	-	-	-		
YET	vb3	1GB	NO	-	-	-		

FIG.14

MIGRATION DESTINATION CACHE REMAINING CAPACITY MANAGEMENT TL 4360

MIGRATION DESTINATION CACHE REMAINING CAPACITY
9GB

FIG.15

PORT BANDWIDTH ALLOCATION MIGRATION TL 4365

43651						
43652						
43653						
43654 43655						
43656 43657						
PROCESSED FLAG	MIGRATION SOURCE PORT DEFINITION			MIGRATION DESTINATION PORT DEFINITION		
	PATH ID	PORT ID	ALLOCATION BANDWIDTH	PATH ID	PORT ID	ALLOCATION BANDWIDTH
DONE	path-b1	port-b1	100MB /s	path-a1	port-a1	100MB /s
DONE	path-b2	port-b1	50MB /s	path-a2	port-a1	50MB /s
DONE	path-b3	port-b3	50MB /s	path-a3	port-a3	50MB /s

FIG.16

PATH MIGRATION TL 4370

43701								
43702								
43710 43703								
43704 43705								
43706 43707 43711								
43708 43709								
PROCESSED FLAG	MIGRATION SOURCE PATH DEFINITION				MIGRATION DESTINATION PATH DEFINITION			
	PATH ID	PORT ID	LUN	LOGICAL VOLUME ID	PATH ID	PORT ID	LUN	LOGICAL VOLUME ID
DONE	path-b1	port-b1	1	vb1	path-a1	port-a1	1	va1
DONE	path-b2	port-b1	2	vb2	path-a2	port-a1	2	va2
DONE	path-b3	port-b3	1	vb1	path-a3	port-a3	1	va1
YET	path-b4	port-b3	2	vb3	-	-	-	-

FIG.17

MIGRATION DESTINATION PORT BANDWIDTH
REMAINING CAPACITY MANAGEMENT TL 4375

PORT ID	PORT BANDWIDTH REMAINING CAPACITY
port-a1	50MB /s
port-a2	200MB /s
port-a3	50MB /s
port-a4	200MB /s

FIG.18

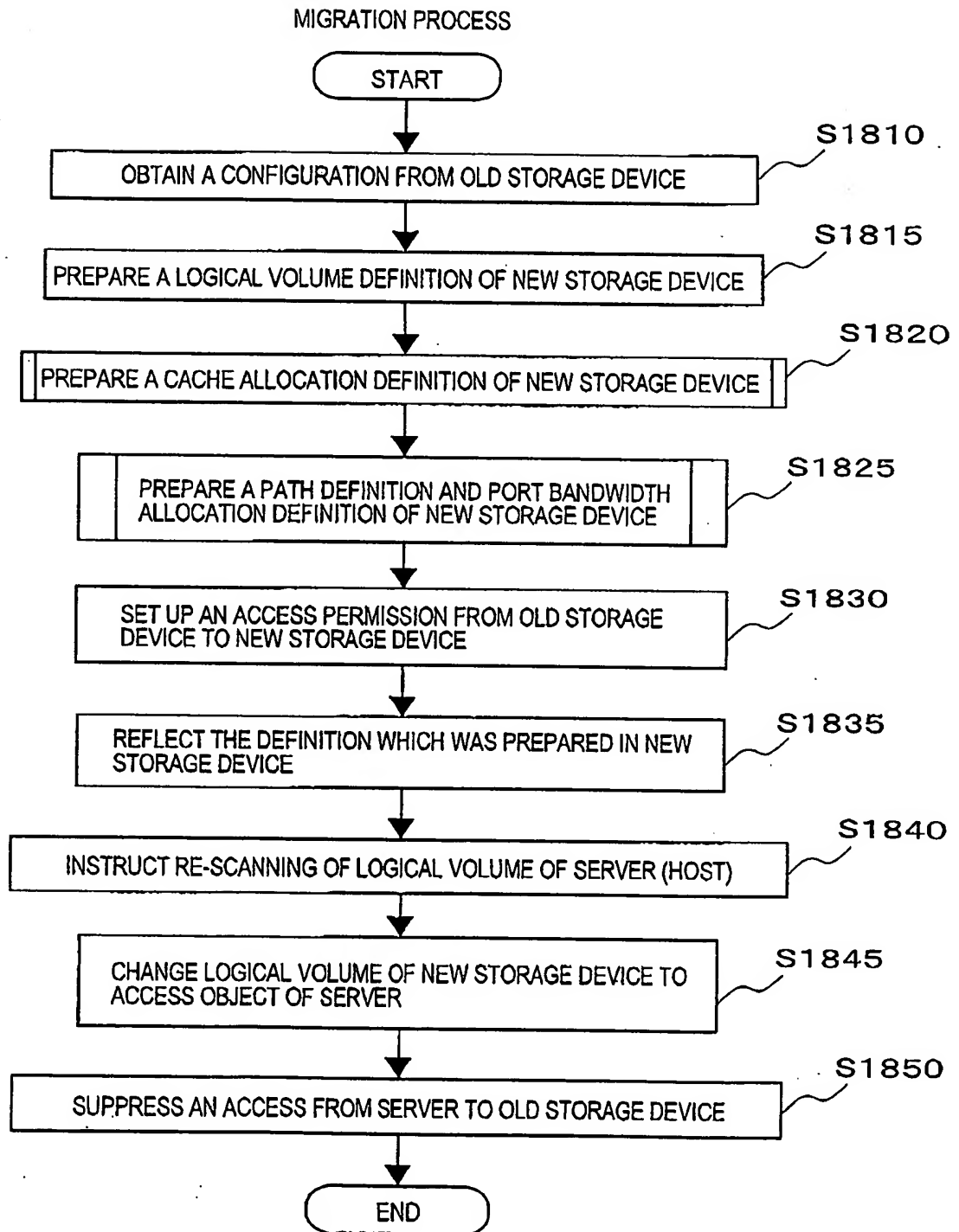


FIG.19

CACHE ALLOCATION DEFINITION PREPARATION PROCESS

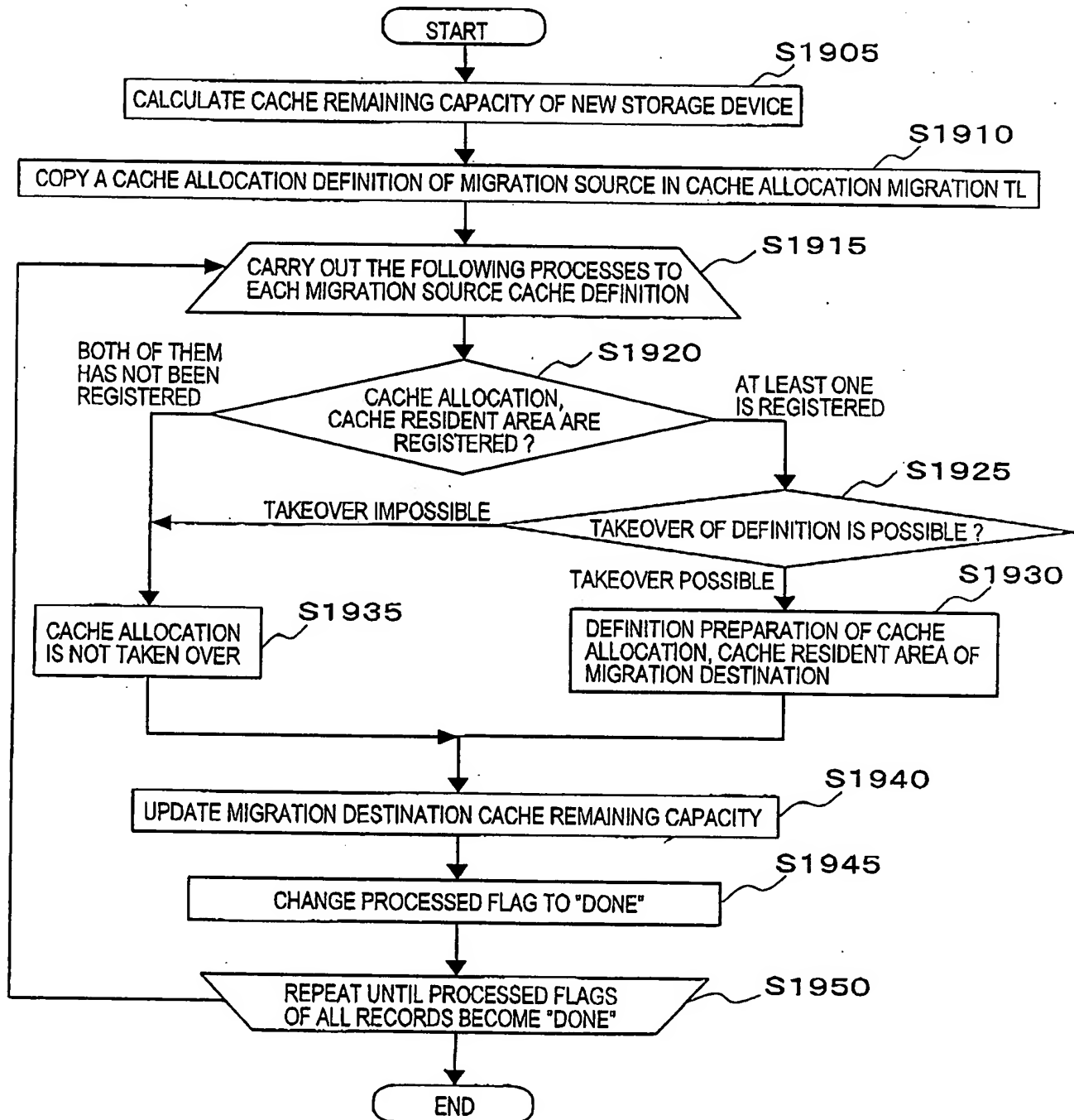


FIG.20

PATH DEFINITION AND PORT BANDWIDTH ALLOCATION DEFINITION PREPARATION PROCESS

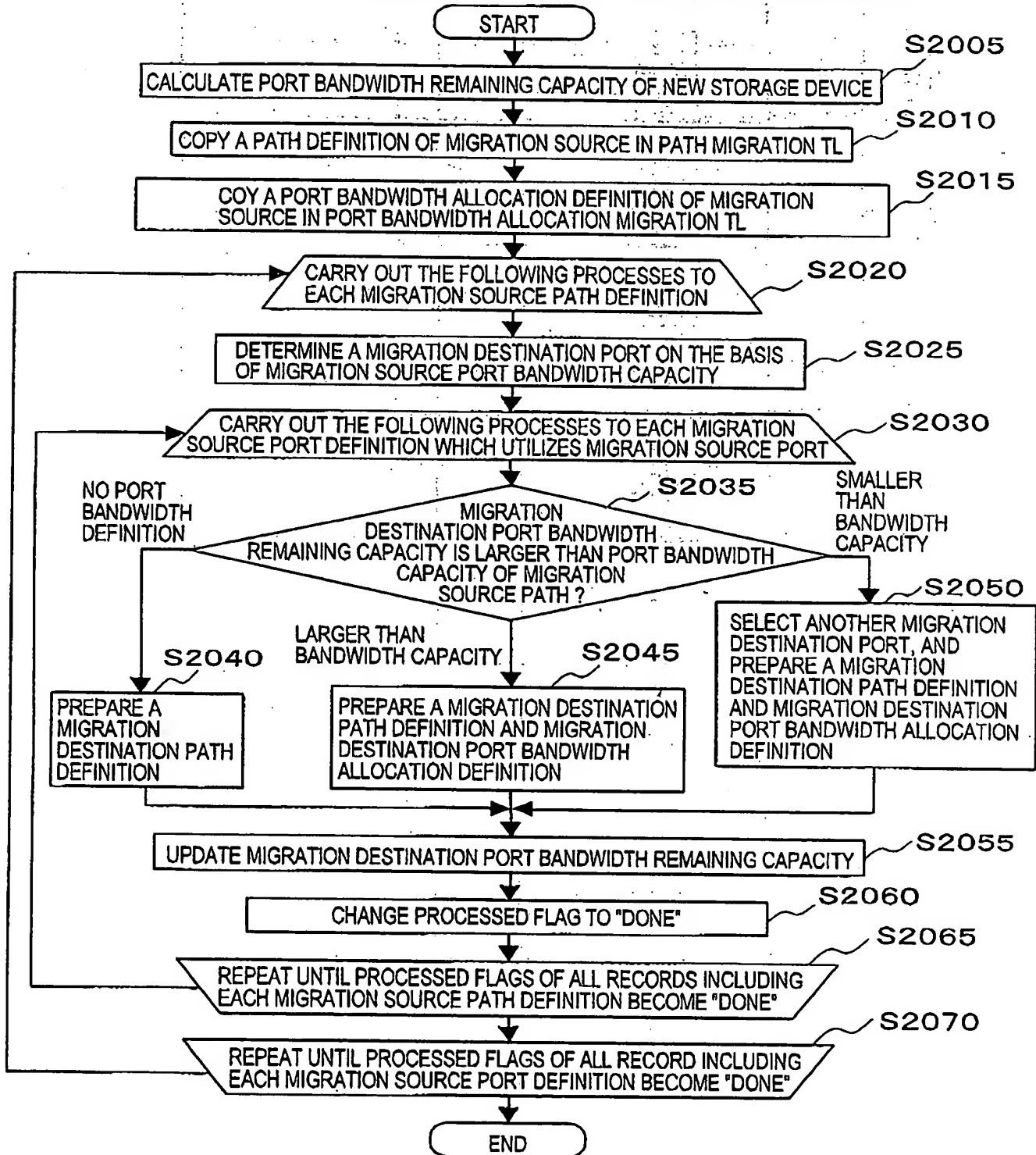


FIG.21

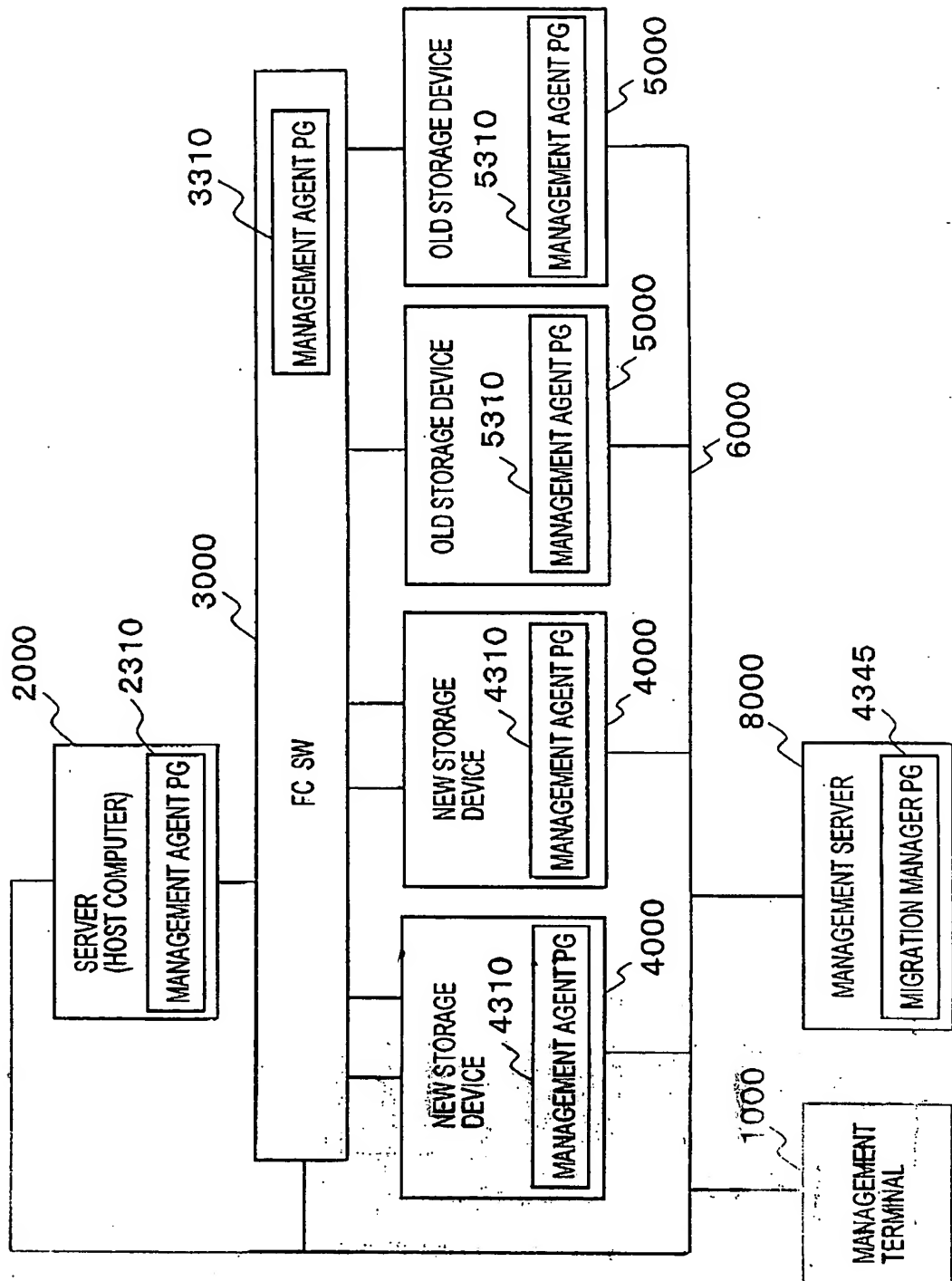


FIG.22

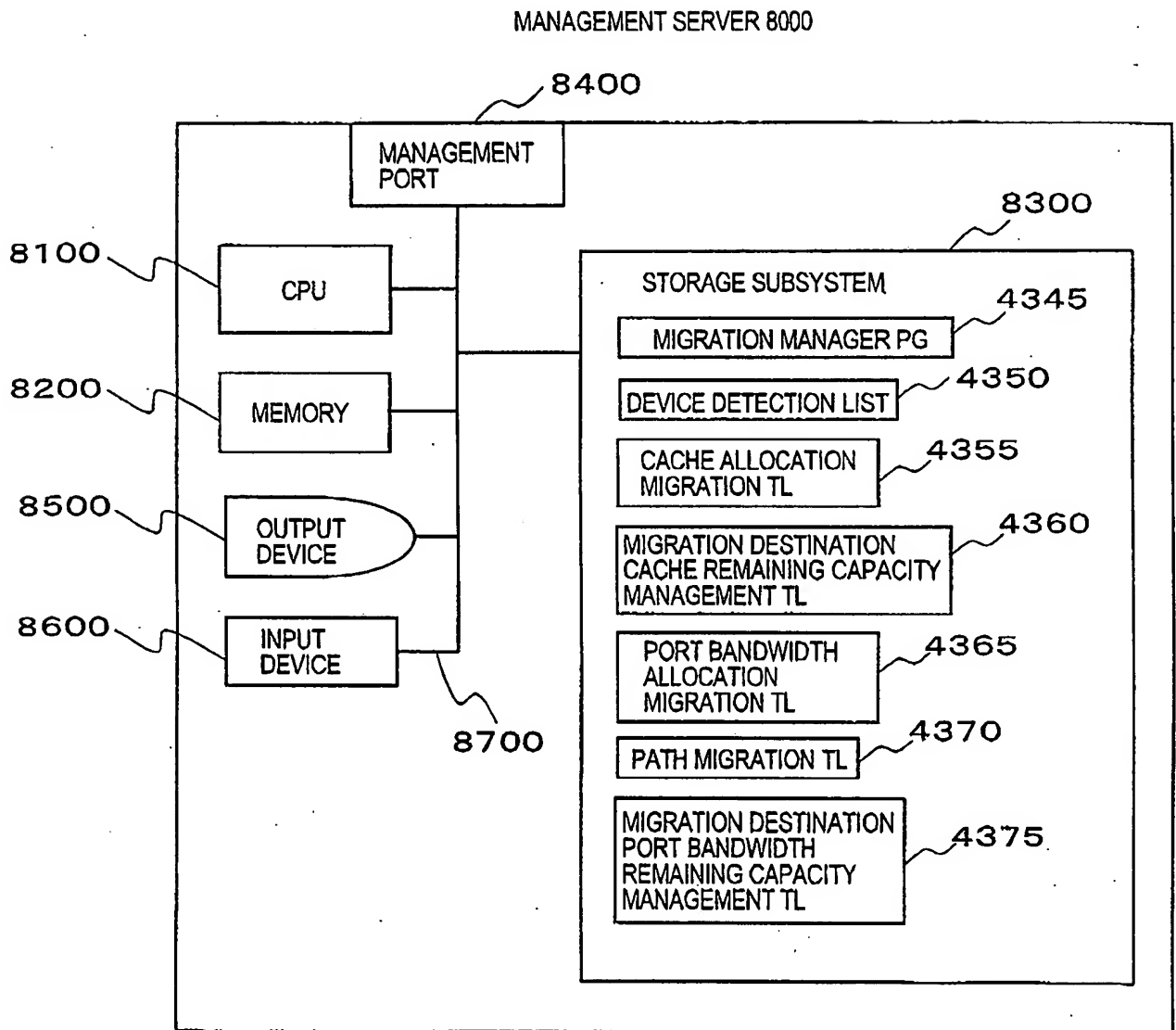


FIG.23

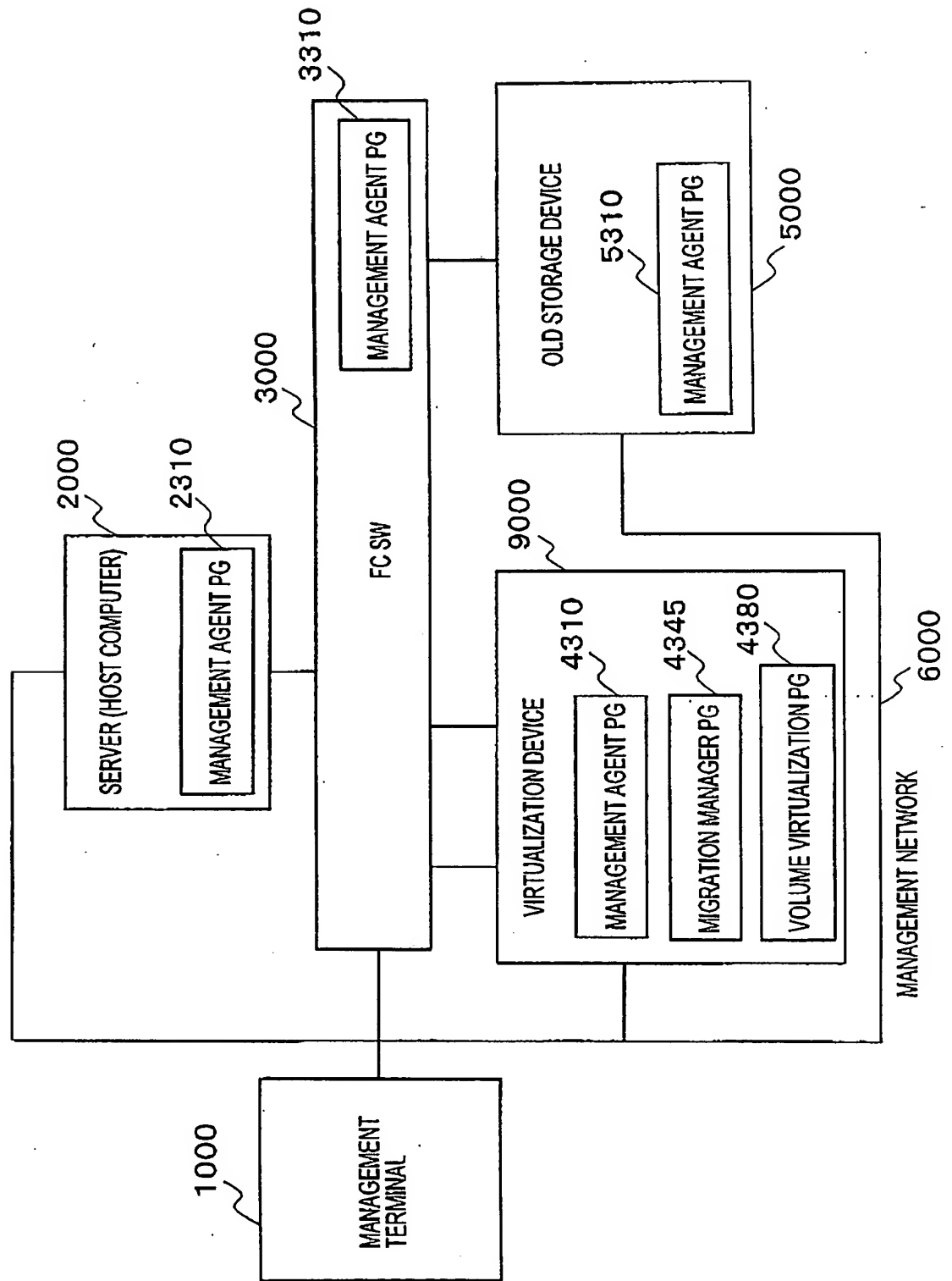


FIG.24

VIRTUALIZATION DEVICE 9000

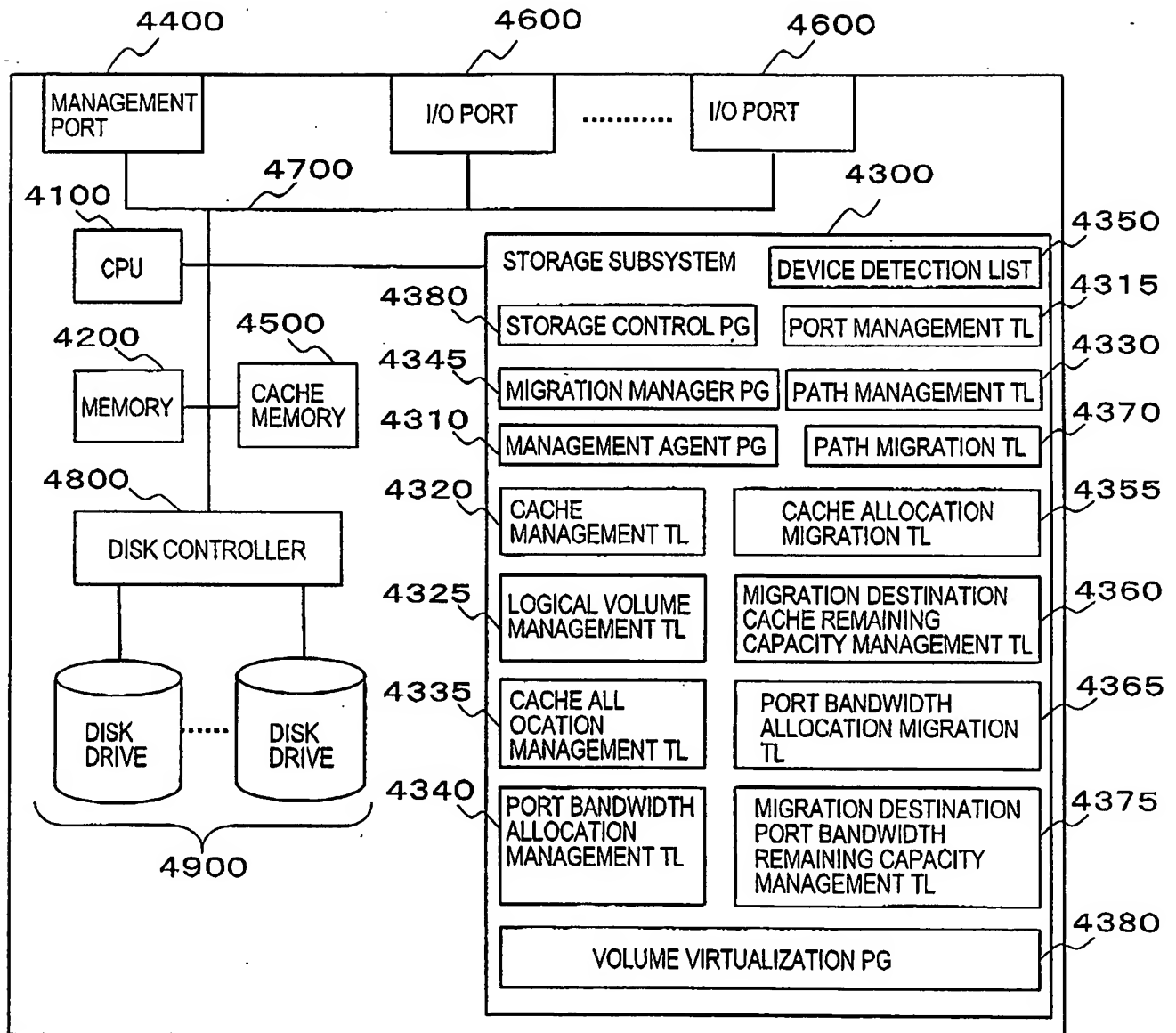


FIG.25

MIGRATION PROCESS

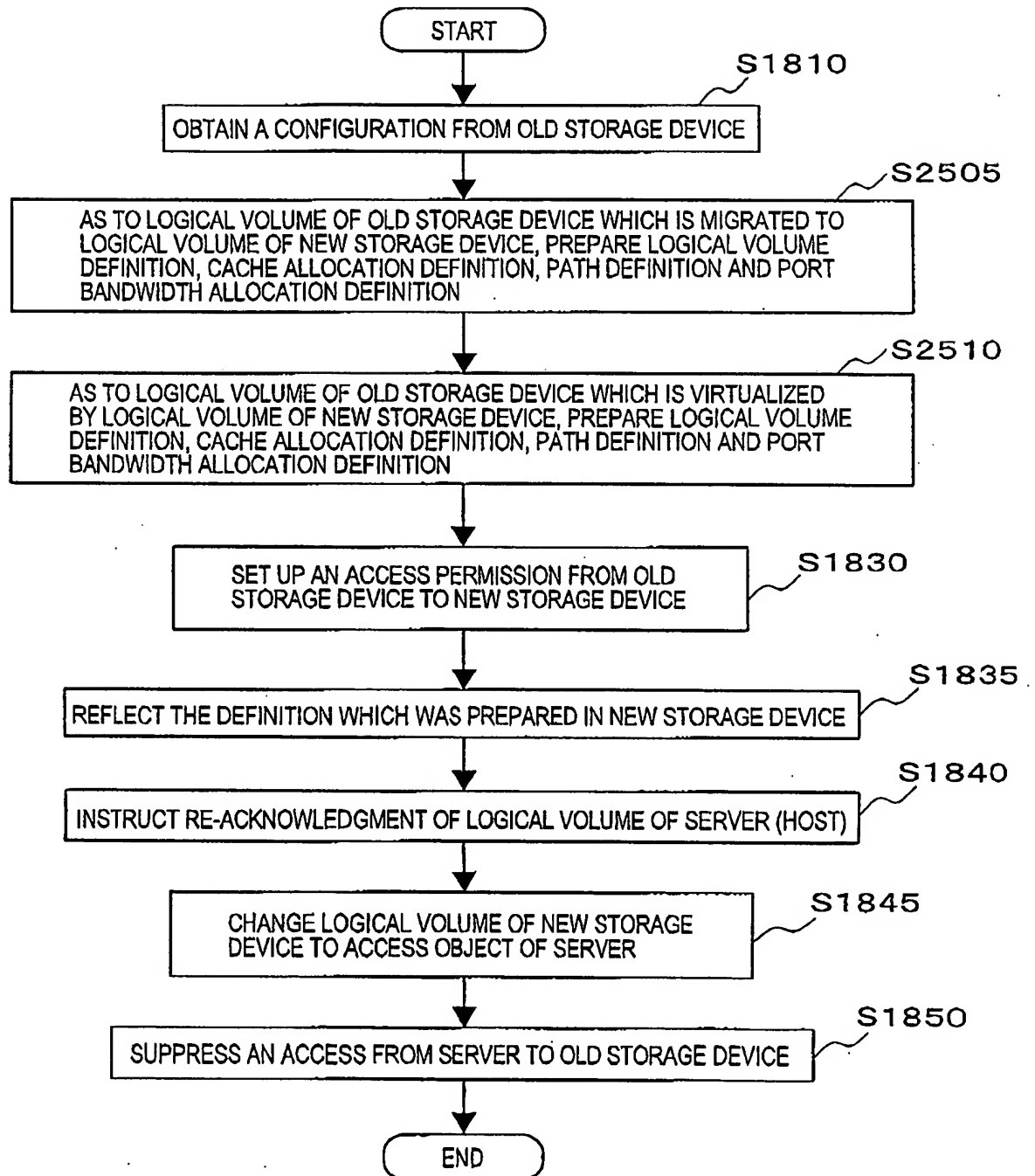


FIG.26

